

CORRESPONDENCE

Re: ‘Long-term Results of a Randomized Controlled Trial Analyzing the Role of Systematic Pre-operative Coronary Angiography Before Elective Carotid Endarterectomy in Patients with Asymptomatic Coronary Artery Disease’

Two meaningful papers by Illuminati et al. have shown real benefits of systematic pre-operative coronary angiography prior to carotid endarterectomy (CEA), suggesting a more aggressive approach to cardiac risk management.^{1,2} However, the high number of inappropriate invasive studies associated with this strategy may be relevant, and the role of prophylactic myocardial revascularization is still under debate. Like Illuminati et al., we routinely performed coronary angiography on a consecutive series of 238 candidates for CEA (January 2005–December 2013), which revealed a prevalence of severe coronary artery disease (CAD; left main trunk stenosis >50%, one-, two-, and three-vessel stenosis >80%) in a subgroup of 64 patients who had diabetes compared with 174 patients without diabetes ($n = 35$ [54.6%] vs. $n = 63$ [36.2%]; $p < .05$). Percutaneous (57.1%) and surgical (42.9%) myocardial revascularization were effective in reducing the post-operative risk in patients with diabetes who usually have a higher peri-procedural myocardial infarction rate than patients without diabetes undergoing CEA. Coexisting CAD in patients scheduled for CEA conveys a peri-operative burden that could offset the long-term benefit of surgery. Routine coronary angiography should be advocated for patients with diabetes who will benefit mainly from prophylactic myocardial revascularization preceding carotid surgery.

REFERENCES

- 1 Illuminati G, Schneider F, Greco C, Mangieri E, Schiariti M, Tanzilli G, et al. Long-term results of a randomized controlled trial analyzing the role of systematic pre-operative coronary angiography before elective carotid endarterectomy in patients with asymptomatic coronary artery disease. *Eur J Vasc Endovasc Surg* 2015;49:366–74.
- 2 Illuminati G, Ricco JB, Greco C, Mangieri E, Calò F, Ceccanei G, et al. Systematic pre-operative coronary angiography and stenting improves post-operative results of carotid endarterectomy in patients with asymptomatic coronary artery disease: a randomised controlled trial. *Eur J Vasc Endovasc Surg* 2010;39:139–45.

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Response to ‘Re: Long-term Results of a Randomized Controlled Trial Analyzing the Role of Systematic Pre-operative Coronary Angiography before Elective Carotid Endarterectomy in Patients with Asymptomatic Coronary Artery Disease’

We wish to thank Drs. Borioni, Tomai, and Garofalo, for their kind comments and are pleased to observe that we all strongly recommend inclusion of systematic coronary angiography in the pre-operative workup of diabetic patients without a history or any symptoms of coronary artery disease (CAD) who are nonetheless candidates for carotid endarterectomy (CEA).^{1,2} We are also pleased to learn that the results in this subset of patients are transferrable to those we obtained in our randomized trial, during long-term follow up.² It is a matter of great satisfaction to observe that major centers of cardiovascular surgery are providing validation for our initial hypothesis on the value of systematic coronary angiography in the standard workup of CEA candidates. This procedure is meant to detect asymptomatic, significant CAD and to treat it either by percutaneous intervention or by coronary artery bypass grafting, thereby virtually eliminating both post-operative and long-term myocardial ischemic events.

We would like to add that using multivariate analysis, our studies have shown a significant prevalence of myocardial ischemia not only in patients without coronary angiography, but also in smokers versus non-smokers limited to the post-operative period¹ and aged less than 70 years, as well as diabetes during long-term follow up.² In fact, if we were to include all of the categories showing a significant correlation with myocardial ischemia, in our indication for pre-operative coronary angiography, we would probably end up by including all CAD asymptomatic CEA candidates; given our randomized results, that is how we have been proceeding.

Nonetheless, Dr. Borioni’s systematic practice of pre-operative coronary angiography in all diabetic patients who are candidates for CEA is absolutely right, as diabetics are the most likely to harbor asymptomatic coronary lesions. As complications of coronary angiography did not appear in our study and are virtually absent from the high caseload hospitals and centers dedicated to the treatment